



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1430
Alexandria, Virginia 22313-1430
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,601	05/03/2002	Mathias Lindner	343-01	8021
27569	7590	12/09/2003	EXAMINER	
PAUL AND PAUL			WYROZEBSKI LEE, KATARZYNA J	
2900 TWO THOUSAND MARKET STREET			ART UNIT	PAPER NUMBER
PHILADELPHIA, PA 19103			1714	

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,601

Applicant(s)

LINDNER, MATHIAS

Examiner

Katarzyna Wyrozebski Lee

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0502 . 6) ☐ Other: .

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites the broad recitation polyamide, and the claim also recites polyamide 6, polyamide 66, polyamide 12, polyamide 46, which is the narrower statement of the range/limitation. In addition parentheses are not appropriate.

In claim 12, the applicants listed that the length of a fiber is at least 3 mm or more than 6 mm, which is also narrow within a broad range.

Claim Objections

3. Claim 9 is objected to because of the following informalities: Claim 9 contains limitation of e.g. PA-66, which is not appropriate. The applicants can either leave the claim limitation as polyamide or change it to PA-66. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 5-8, 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by HANLEY (US 5,114,992).

The prior art of HANLEY discloses composition comprising long glass fibers. The glass fibers are first pre-treated with sizing agents that are disclosed in Table I, col. 6. The sizing

Art Unit: 1714

agents include epoxy resin, polyurethane/epoxy blend, polyurethane and acrylate. The pre-treated fiber is then incorporated into another resin.

Second thermoplastic resin is alternating copolymer of carbon monoxide and at least one unsaturated hydrocarbon (claim 1). The examples of HANLEY disclose ethylene and propylene. The specification further disclose the monomers that include styrene and methyl styrene (col. 2, lines 20-24)

The glass fibers in the composition of HANLEY and according to the examples are utilized in amount of 1-45 wt % (claim 1). The fiber utilized in the composition of HANLEY has length of 0.1-0.5 inch (col. 4, lines 16-18), which is equivalent to 2.5-12.7 mm.

In the method of HANLEY, the fibers are first pretreated with sizing polymer then coated with carbon monoxide containing polymer through twin-screw extruder (Example 1). Each sample contained 30% by weight of glass fibers. The mixture of pre-treated glass fibers and thermoplastic polymer was then molded into an article for use in automotive industry and structural parts (col. 5, under Table II). The extrusion is conducted at elevated temperature to render the ketone polymer flowable.

In the light of the above disclosure, the prior art of HANLEY anticipates requirements of claims rejected above.

6. Claims 1-9, 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by GUERRINI (US 5,362,431).

The prior art of GUERRINI discloses composition comprising long glass fibers. According to example 1 of the prior art of GUERRINI fibers were impregnated with polyamide

Art Unit: 1714

in amount of 20 pbw and thermoplastic powder was added. Semi-finished product was heated to cause the polymer to melt and cut into long granules of 2-10 mm long (claim). This semi-finished product was then injection molded into an article with use of extruder.

The polymers used for first coating of the fiber include PE and its copolymer with vinyl acetated, polypropylene, polystyrene and its copolymers, ABS, SAN, PMMA and the like (claim 16). Polymers utilized as powder or matrix polymer can be chosen from the same list as the coating fibers (claim 2) and these polymers can be the same or different (col. 2, lines 64-66). In the examples the amount of two polymers is 20 for the first polymer and 60 for the second polymer. With 20 pbw of glass fibers it will add up to 100 (example 1).

Glass fibers of GUERRINI are 2-150mm long (col. 4, lines 15-17). Other fibers can also be utilized and they include carbon fibers or aramid fibers (col. 3, lines 7-10).

In the light of the above disclosure, the prior art of GUERRINI anticipates requirements of claims rejected above.

7. Claims 1-8, 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by SAITO (US 5,866,648).

The prior art of SAITO discloses long fiber composition comprising at least two thermoplastic polymers.

The long fibers of the prior art of SAITO are selected from rock wool, glass fiber, metallic fiber, carbon fiber, aramid fiber and polyester fiber (col. 3, lines 1-5). The final composition has 20-45 wt % of fiber content (col. 7, line 5). Although the prior art of SAITO does not specifically disclose the length of the fiber, it teaches that the length is the length of the

Art Unit: 1714

pellet (col. 4, 21-24). The pellet is obtained by cutting the resin with long fiber to length of 3-30 mm (col. 4, lines 45-47).

The first polymer is polyamide and it includes polyamide -6, polyamide-11, polyamide-12, polyamide-66, polyamide-6,10, polyamide-6,12 and MXD-6 (col. 3, lines 42-47).

The second polymer of SAITO is an alloy of polyolefin and polyamide (col. 4, line 67). Polyolefins include PE, PP and copolymers thereof, preferred polyolefin is PP (col. 5, lines 15-20).

The process of SAITO is depicted in col. 4 starting line 27. First a master batch is created by mixing together long fibers with polyamide. The mixture is then extruded and palletized so that pellets are at least 3 mm long. Next the palletized PA/fiber mixture is incorporated into alloy of PP and PA. PP resin is incompatible with PA therefore it is modified with maleic anhydride, not necessarily to render it compatible but more to render it reactive with PA (examples).

Composition resulting from the process of SAITO is utilized in automotive industry for articles such as bumpers or covers (col. 13, lines 1-5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 1714

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over HANLEY (US 5,114,992) or GUERRINI (US 5,362,431) or SAITO (US 5,866,648) either one of which in view of DEWITT (US 6,221,951).

The discussion of the disclosure of the prior art of HANLEY or GUERRINI or SAITO from paragraph 5 or 6 or 7 respectively is incorporated here by reference.

The difference between the present invention and the disclosure of the prior art of HANLEY or GUERRINI or SAITO is recitation of pre-treating the glass fibers or functionalizing them.

With respect to the above difference, the prior art of DE WITT discloses long fiber composition comprising glass fibers and thermoplastic resin. The glass fibers are pre-treated so that they contain acrylic functionality. Other components include alkoxy or glycidyl silanes (col. 3, lines 38-55).

According to the disclosure of DE WITT the pre-treatment of the fibers increases bonding between the fiber and the polymer utilized.

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art at the time of the present invention to pre-treat the fibers of either HANLEY or GUERRINI or SAITO and thereby obtain the claimed invention. Pre-treatment of the fibers would increase adhesion between the fibers and polymeric component.

Beginning December 12, 2003 the new phone number for the examiner of record will be 571-272-1127.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

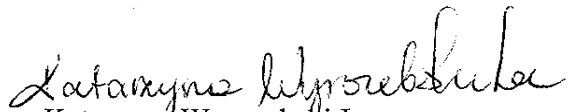
Application/Control Number: 10/019,601

Page 9

Art Unit: 1714

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Katarzyna Wyrozebski Lee
Primary Examiner
Art Unit 1714

December 3, 2003